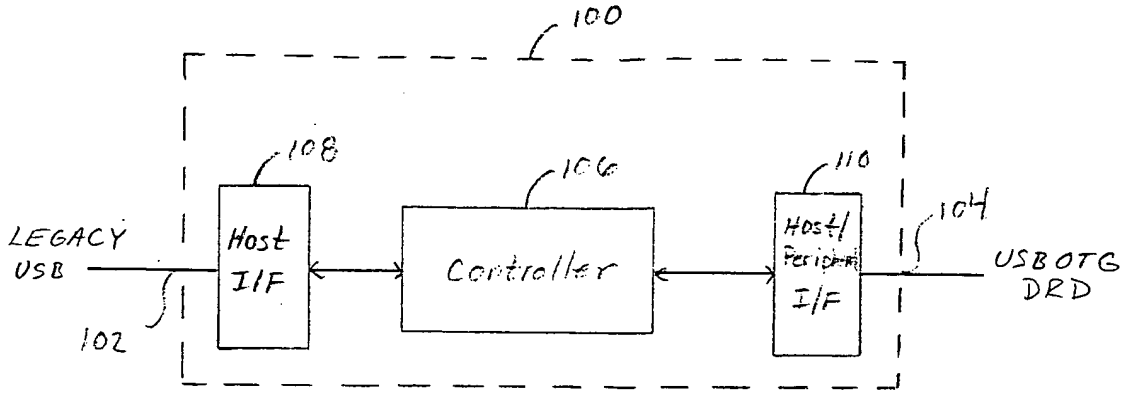
100
108
106
110
104
LEGACY USB
Host I/F
Controller
Host/ Peripheral I/F
USB OTG DRD
102

FIG. 1

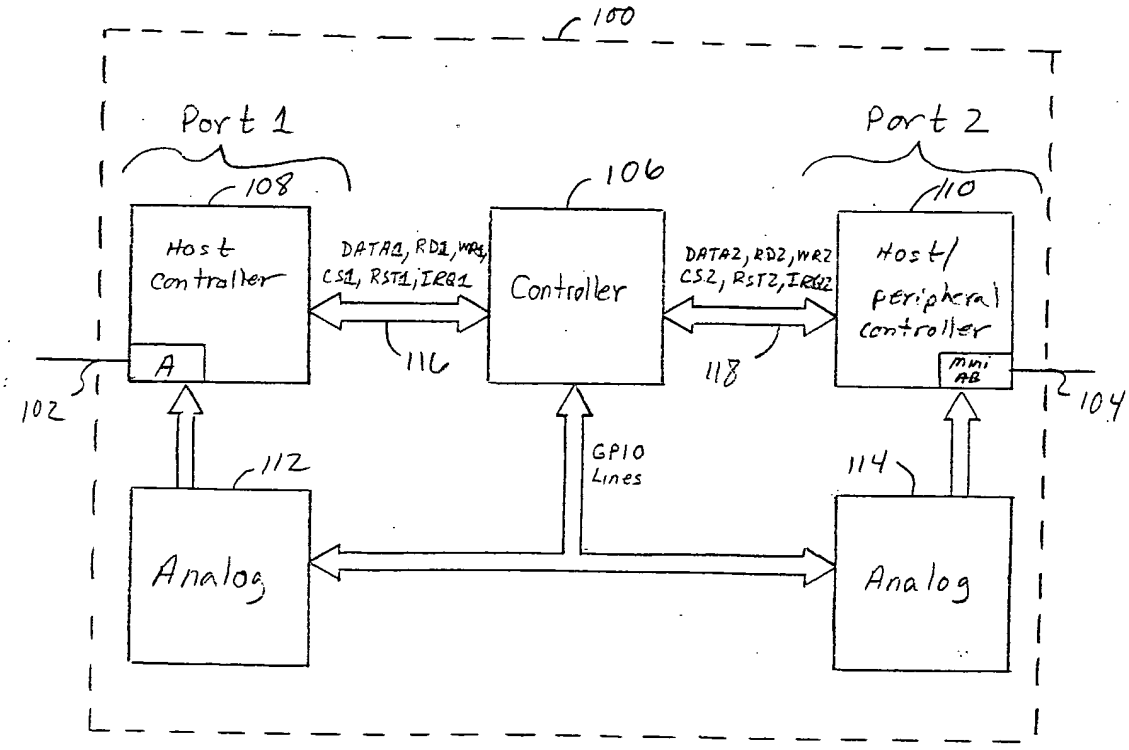
100
Port 1
Port 2
108
106
110
Host Controller
DATA1, RD1, WR1, CS1, RST1, IRQ1
Controller
DATA2, RD2, WR2, CS2, RST2, IRQ2
Host/ peripheral controller
A
mini AB
116
118
102
104
112
GPIO Lines
114
Analog
Analog

FIG. 2

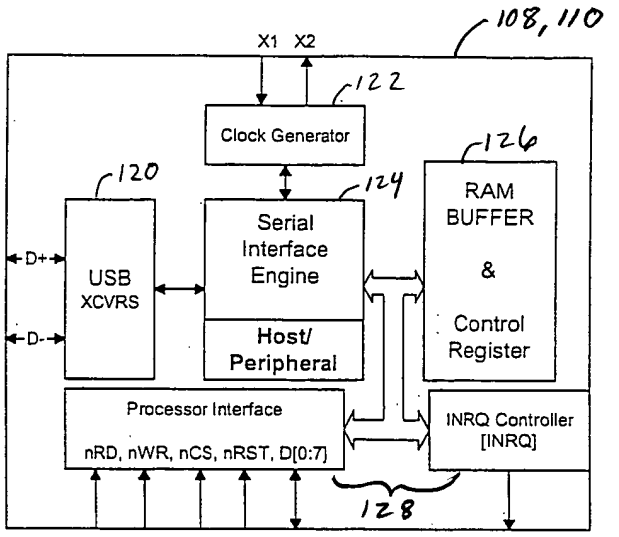
108, 110
X1 X2
122
Clock Generator
126
120
124
RAM
BUFFER
&
Control
Register
D+
USB
XCVRS
D-
Serial
Interface
Engine
Host/
Peripheral
Processor Interface
nRD, nWR, nCS, nRST, D[0:7]
INRQ Controller
[INRQ]
128

FIG. 3

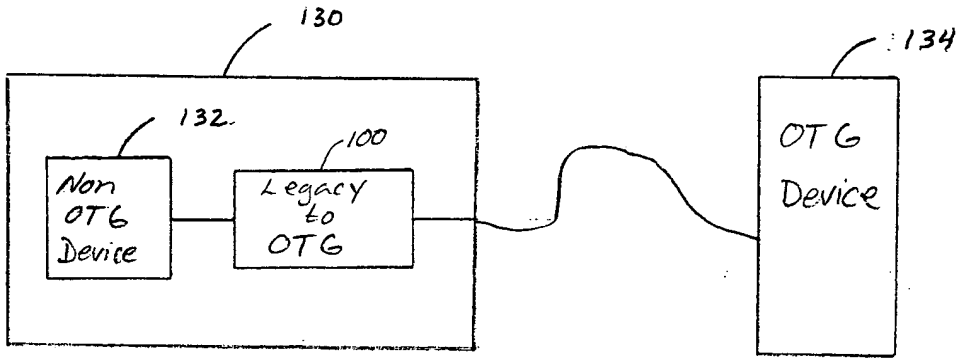
130
134
132
100
Non
OTG
Device
Legacy
to
OTG
OTG
Device

FIG. 4

20070234-020401

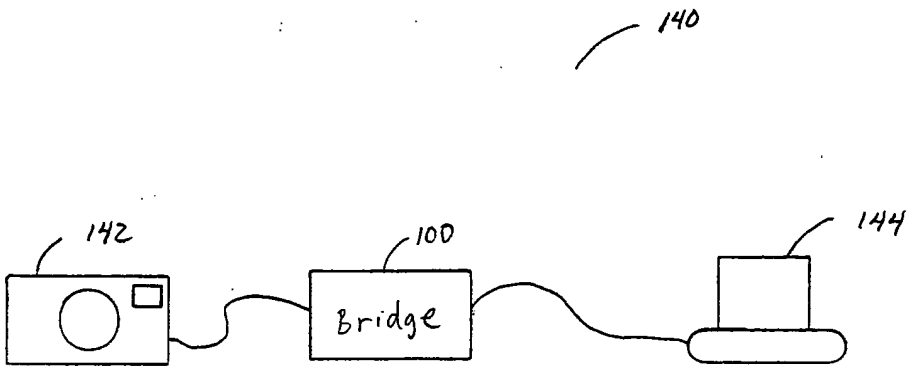

FIG. 5

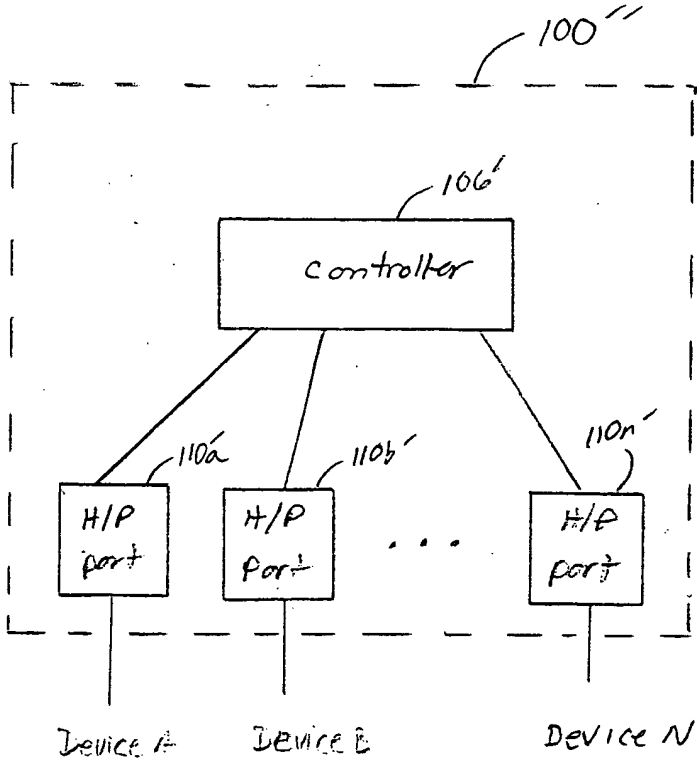

FIG. 6

Docket: 2004-0218

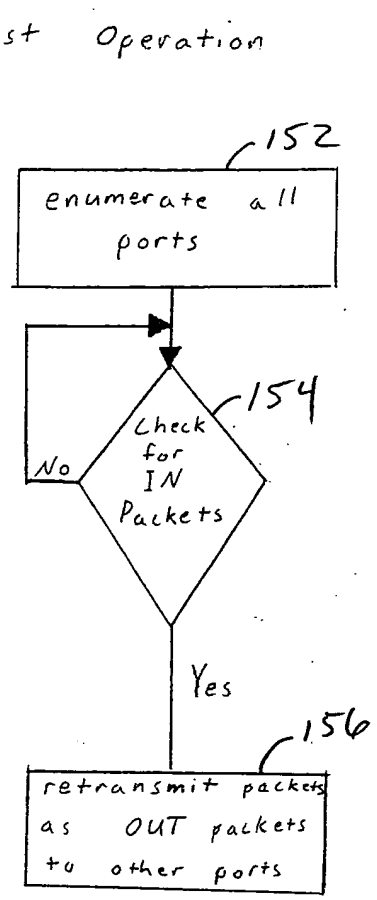

FIG. 7

20070243-020708

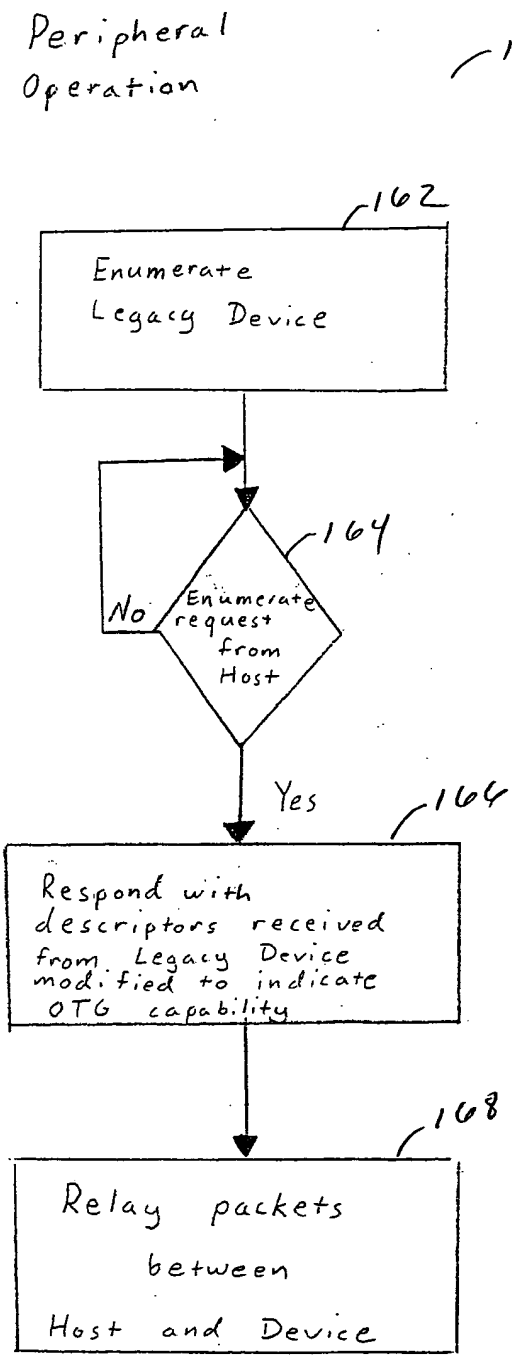

FIG. 8

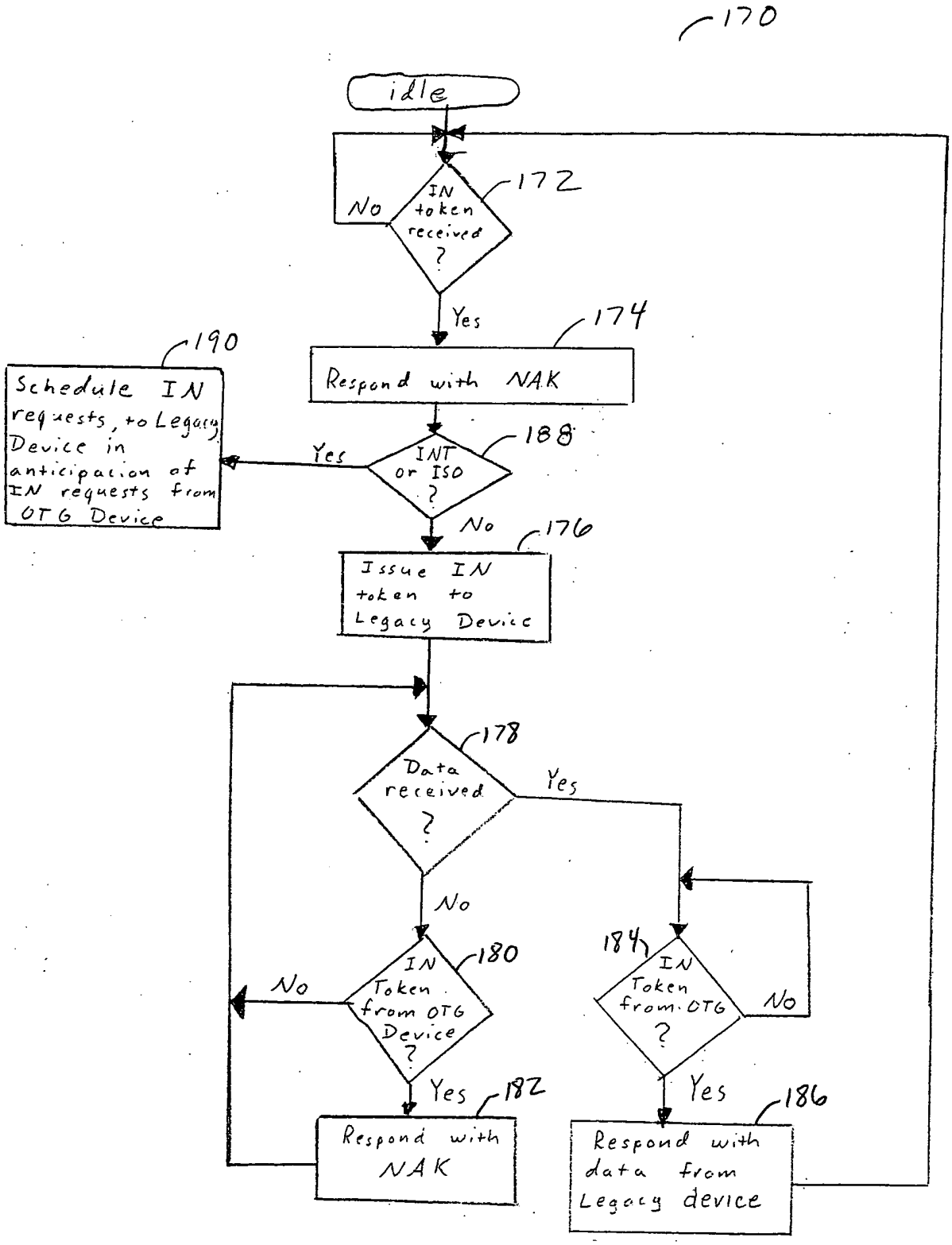
170
idle
172
IN token received ?
No
Yes
174
Respond with NAK
188
INT or ISO ?
Yes
190
Schedule IN requests, to Legacy Device in anticipation of IN requests from OTG Device
No
176
Issue IN token to Legacy Device
178
Data received ?
Yes
No
180
IN Token from OTG Device ?
No
Yes
182
Respond with NAK
184
IN Token from OTG ?
No
Yes
186
Respond with data from Legacy device

FIG. 9